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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
SISSON, BRADLEY L	

ART UNIT	PAPER NUMBER
1634	

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/437,726	STEMMER ET AL.	
	Examiner	Art Unit	
	Bradley L. Sisson	1634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 December 2004 and 28 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *27 and 31-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *27 and 31-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *06 December 2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The specification is objected to as documents have been improperly incorporated by reference. In particular, the specification states at page 4:

> of prior invention. All publications cited are incorporated herein by reference,
> 30 whether specifically noted as such or not.

The specification also states at page 87:

> *All publications and patent applications herein are incorporated by reference to the same extent as if each individual publication or patent application was specifically and individually indicated to be incorporated by reference.*

Such omnibus language fails to specify what specific information applicant seeks to incorporate by reference and similarly fails to teach with detailed particularity just where that specific information is to be found in each of the cited documents.

Attention is also directed to MPEP 608.01(p)I, which, in pertinent part, is reproduced below:

> Mere reference to another application, patent, or publication is not an incorporation of anything therein into the application containing such reference for the purpose of the disclosure required by 35 U.S.C. 112, first paragraph. In re de Seversky, 474 F.2d 671, 177 USPQ 144 (CCPA 1973). In addition to other requirements for an application, the referencing application should include an identification of the referenced patent, application, or publication. Particular attention should be directed to specific portions of the referenced document where the subject matter being incorporated may be found. (Emphasis added)

As set forth In *Ex parte* Raible, 8 USPQ2d 1707, (BPAI, 1998)

> The examiner is of the opinion that the general incorporation by reference of the Bentley disclosure in appellant's specification is insufficient to support the specific disputed limitations of the present claims in the manner required by section 112 of the statute. We agree

* * *

> We believe that the doctrine of incorporation by reference is of no avail to appellant in this regard since there is no specific indication in the instant specification of the particular features disclosed by Bentley which correspond to those intended for use in the here-claimed device; nor does the specification identify the specific portions of the patent which appellant may have intended to rely upon to supplement his disclosure. The purpose of incorporation by reference in an application of matter elsewhere written down is for economy, amplification, or clarity of exposition, by means of an incorporating statement clearly identifying the subject matter which is incorporated and where it is to be found. In re de Seversky , 474 F.2d 671, 177 USPQ 144 , (CCPA 1973).

Accordingly, the cited documents are not considered to have been properly incorporated by reference and as such, have not been considered with any effect towards their fulfilling, either in part or in whole, the enablement, written description, or best mode requirements of 35 USC 112, first paragraph.

Response to argument

2. Applicant's representative, at pages 8-9 of the response received 06 Dec ember 2004 provides word-by-word comparison of the quotation found at page 4, and reproduced in the prior Office action, with that found at page 87 of the same specification. It appears that the intent of this comparison is to assert that the Office has misquoted applicant's disclosure and as such the objection should be withdrawn. As presented above, however, the very statement that said representative takes exception to is indeed found in the specification as asserted.

3. At page 9 of the response said representative asserts that the specification provides the relevant pages of documents cited, drawing attention to page 58, lines 9-17. This argument has not been found persuasive as a cursory review of the disclosure finds numerous instances where no page, relevant or not, has been identified. In support of this position attention is directed to page 21 of the disclosure, relevant part of which is reproduced below.

thereof. A general description of shuffling is provided in commonly-assigned WO98/13487 and WO98/13485, both of which are incorporated herein in their entirety by reference; in case of any conflicting description of definition between any of the incorporated documents and the text of this specification, the present

As can be seen above, applicant has injected the phrase "in their entirety," which is the very phrase that said representative asserts at page 9 of the response as NOT having been used by applicant.

4. At page 10 of the response said representative provides conclusory remarks as to what the publishers of *Nature* think or do not think. Similar argument is presented at page 11 of the response as to what one of skill in the art does. These arguments have not been found persuasive. Attention is directed to MPEP 2145.

> Attorney argument is not evidence unless it is an admission, in which case, an examiner may use the admission in making a rejection. See MPEP § 2129 and § 2144.03 for a discussion of admissions as prior art.
> The arguments of counsel cannot take the place of evidence in the record. In re Schulze, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); In re Geisler, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997) ("An assertion of what seems to follow from common experience is just attorney argument and not the kind of factual evidence that is required to rebut a prima facie case of obviousness."). See MPEP § 716.01(c) for examples of attorney statements which are not evidence and which must be supported by an appropriate affidavit or declaration.

For the above reason, and in the absence of convincing evidence to the contrary, the objection to the specification is maintained.

5. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code; see page 3, line 16. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

6. It is noted that applicant, at page 6 of their response of 09 October 2001 assert that hyperlinks have been deleted, however, the hyperlink found at this page does not appear to have been treated.

Response to argument

7. At page 11 of the response applicant's representative asserts that certain "web-sites" have been retained "out of an abundance of caution" but that the web-sites so identified are not "an 'embedded hyperlink.'" This argument has not been found persuasive for the 'web-site' identified at page 3, line 16, is a hyperlink. Appropriate action is required.

8. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code; see e.g., page 3, line 16. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

Priority

9. Applicant's claim for domestic priority under 35 U.S.C. 119(e) is acknowledged. However, the provisional application upon which priority is claimed fails to provide adequate support under 35 U.S.C. 112 for claims 27 and 31-37 of this application.

Response to argument

10. At pages 11-16 of the response said representative provides a comparative showing as to where support for claim limitations can be found in the priority document. This argument has not been found persuasive as the asserted priority document has not been found to satisfy the enablement, written description, and best mode requirements for that which is claimed instantly.

While a comparison between the two applications has been made, it is not enough that there be literal support for some of the claims. Rather, the priority document must, as noted above, also satisfy the enablement, written description, and best mode requirements of 35 USC 112, first paragraph. Such a showing has not been made. Accordingly, and in the absence of convincing evidence to the contrary, the denial of benefit of priority is maintained.

Claim Rejections - 35 USC § 112

11. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

12. Claims 27 and 31-37 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Attention is directed to the decision in *University of Rochester v. G.D. Searle & Co.* 68 USPQ2D 1424 (Fed. Cir. 2004) at 1428:

> To satisfy the written-description requirement, the specification must describe every element of the claimed invention in sufficient detail so that one of ordinary skill in the art would recognize that the inventor possessed the claimed invention at the time of filing. Vas-Cath, 935 F.3d at 1563; see also Lockwood v. American Airlines, Inc., 107 F.3d 1565, 1572 [41 USPQ2d 1961] (Fed. Cir. 1997) (patent specification must describe an invention and do so in sufficient detail that one skilled in the art can clearly conclude that "the inventor invented the claimed invention"); In re Gosteli, 872 F.2d 1008, 1012 [10 USPQ2d 1614] (Fed. Cir. 1989) ("the description must clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed"). Thus, an applicant complies with the written-description requirement "by describing the invention, with all its claimed limitations, not that which makes it obvious," and by using

"such descriptive means as words, structures, figures, diagrams, formulas, etc., that set forth the claimed invention." Lockwood, 107 F.3d at 1572.

13. For convenience, claim 27, the sole independent claim under consideration, is reproduced below.

> **Claim 27** **(previously presented) A method for obtaining an isolated polynucleotide comprising a sequence encoding a protein having Rubisco carboxylation activity, the method comprising:**
>
> **recombining a plurality of parental polynucleotide species encoding at least one protein having Rubisco carboxylation activity under conditions suitable for sequence shuffling to form a resultant library of sequence-shuffled polynucleotides;**
>
> **transferring said library into a plurality of host cells, thereby forming a library of transformants wherein sequence-shuffled Rubisco polynucleotides are expressed;**
>
> **identifying at least one transformant from said library that expresses an enhanced protein having a Rubisco carboxylation activity that is enhanced to an extent that is statistically significant relative to the Rubisco carboxylation activity of proteins encoded by the plurality of parental polynucleotide species, wherein the identified transformant contains a polynucleotide comprising a sequence encoding the enhanced protein; thereby obtaining a polynucleotide comprising a sequence encoding the enhanced protein.**

14. For purposes of examination, claim 27 has been interpreted as encompassing the modification of an infinite number "parental polynucleotide species" that encode any polypeptide that has any level of RUBISCO (ribulose-1,5-bis-phosphate carboxylase) carboxylation activity. While claims 33-37 stipulate that the parent polynucleotide encodes a certain subunit, the specification does not provide an adequate written description of the amino acids that the various subunits, or their equivalents, are comprised of.

15. Said claim 27, and claims 31-37, which depend therefrom, have also been interpreted as encompassing the production and screening of an infinite number of transformants. The

originally filed application does not support the position that applicant was in possession of a method whereby any number of transformants could be screened. In support of this position, attention is directed to page 3 of the Declaration of Genhai Zhu pursuant to 37 CFR 1.132 on 13 November 2002, where is stated: "It would be physically impossible to screen more than a tiny fraction of [1 x 10^{16}] cells." Therefore, in view of sworn statements of applicant's own declarant, and in the absence of convincing evidence to the contrary, the specification does not reasonably suggest that applicant had possession of the claimed invention at the time of filing.

16. In order to practice the claimed method, one must first have such "parental polynucleotide species." A review of the specification fails to find an adequate written description of any such parent polynucleotide species. Further, the specification does not provide an adequate written description of what polynucleotide sequences are essential to exhibiting any level of RUBISCO carboxylation activity. While the specification does provide various citations, such citations have been improperly incorporated by reference and cannot therefore, be relied upon for satisfaction of the written description requirement.

17. For the above reasons, and in the absence of convincing evidence to the contrary, claims 27 and 31-37 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

Response to argument

18. At page 16, bridging to page 17 of the response, said representative asserts "the Patent Office has failed to meet its burden by providing evidence why one skilled in the art would not consider the Applicants' disclosed method applicable to any RUBISCO enzyme."

19. The above argument has been considered and has not been found persuasive towards the withdrawal of the rejection. The issue is not whether the claimed method is "applicable to any RUBISCO enzyme," as the record clearly shows that the Office considers the presently claimed method to encompass just such scope, but rather, whether the original disclosure provides an adequate written description of the full scope of the claimed invention. It is not enough that one wants to alter the nucleotide sequence of a polynucleotide, for here the polynucleotide must encode an amino acid sequence that in turns has a specific enzymatic activity. The specification has not provided an adequate written description of just what nucleotide sequences encode polypeptides that have such activity.

20. Page 33 of the specification states in part:

> **All sequences referred to herein or equivalents which function in the disclosed methods can be retrieved by GenBank database file designation or a commonly used reference name which is indexed in GenBank or otherwise published are incorporated herein by reference and are publicly available. Over 1,000 Rubisco homologues are available, e.g., in GenBank.**

As indicated above, the attempt to incorporate by reference material by reference has been improper and as such, the cited documents and the material found therein have not been considered to the extent that they fulfill the written description requirement of 35 USC 112, first paragraph. While the disclosure infers that there are a number of "homologues" known, the disclosure is silent as to what their accession numbers are, much less provide a full, clear and concise description of their nucleic acids, and the functionality of the encoded.

21. At pages 18-19 of the response applicant's representative asserts that DNA shuffling accelerates the screening process, and that one skilled in the art would not believe that the claimed method would result in an infinite number of transformants to screen.

22. The above argument has been fully considered and has not been found persuasive, as no evidence has been provided which establishes what one of skill in the art would or would not consider. While applicant's representative asserts that the method would not result in an infinite number of transformants to screen, no showing is made as to just how many it would produce. Further, a presently worded, the claimed method fairly encompasses recombining any number of polynucleotide species, which, as said representative asserts, is to "yield mutants that are 'far more divergent' than 'point mutations.'"

23. Agreement is reached in principle where at page 24 of the response said representative asserts that it is possible to enable an invention yet not satisfy the written description requirements of 35 USC 112, first paragraph. In the present case, however, the specification fails to satisfy both the written description requirement and the enablement requirement. Accordingly, with there being virtually no limit to the number of polynucleotides being recombined, that the method admittedly yielding transformants that are "far more divergent," and with no convincing evidence to the contrary, the rejection is maintained.

24. Claims 27 and 31-37 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains,

or with which it is most nearly connected, to make and/or use the invention. As set forth in *Enzo Biochem Inc., v. Calgene, Inc.* (CAFC, 1999) 52 USPQ2d at 1135, bridging to 1136:

> To be enabling, the specification of a patent must teach those skilled in the art how to make and use the full scope of the claimed invention without 'undue experimentation.' " *Genentech, Inc. v. Novo Nordisk, A/S*, 108 F.3d 1361, 1365, 42 USPQ2d 1001, 1004 (Fed. Cir. 1997) (quoting *In re Wright*, 999 F.2d 1557, 1561, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993)). Whether claims are sufficiently enabled by a disclosure in a specification is determined as of the date that the patent application was first filed, see *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1384, 231 USPQ 81, 94 (Fed. Cir. 1986).... We have held that a patent specification complies with the statute even if a "reasonable" amount of routine experimentation is required in order to practice a claimed invention, but that such experimentation must not be "undue." See, *e.g.*, *Wands*, 858 F.2d at 736-37, 8 USPQ2d at 1404 ("Enablement is not precluded by the necessity for some experimentation . . . However, experimentation needed to practice the invention must not be undue experimentation. The key word is 'undue,' not 'experimentation.' ") (footnotes, citations, and internal quotation marks omitted). In *In re Wands*, we set forth a number of factors which a court may consider in determining whether a disclosure would require undue experimentation. These factors were set forth as follows: (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims. *Id.* at 737, 8 USPQ2d at 1404. We have also noted that all of the factors need not be reviewed when determining whether a disclosure is enabling. See *Amgen, Inc. v. Chugai Pharm. Co., Ltd.*, 927 F.2d 1200, 1213, 18 USPQ2d 1016, 1027 (Fed. Cir. 1991) (noting that the *Wands* factors "are illustrative, not mandatory. What is relevant depends on the facts.").

25. The claimed method fairly encompasses the production of polynucleotides that encode a protein that has virtually any increased level of RUBISCO (ribulose-1,5-bis-phosphate carboxylase) carboxylation activity. It is clear that in order to practice the claimed method, one must have a plurality of "parental polynucleotide species" where at least one of said parental polynucleotides encodes a polypeptide that exhibits RUBISCO carboxylation activity. As presented above, the specification does not reasonably suggest that applicant was in possession of the claimed invention at the time of filing. It is well settled that one cannot enable an

invention that they do not yet possess. Accordingly, and in he absence of convincing evidence to the contrary, claims 27 and 31-37 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement.

26. As noted above, the specification does not provide an adequate written description of the essential starting materials- the parental polynucleotides. Further, the specification does not provide an adequate teaching of the structure-function relationship such that alternative parental polynucleotides could be used in the claimed process. In short, applicant has not provided the essential starting materials. The situation at hand is analogous to that in *Genentech v. Novo Nordisk A/S* 42 USPQ2d 1001. As set forth in the decision of the Court:

> " '[T]o be enabling, the specification of a patent must teach those skilled in the art how to make and use the full scope of the claimed invention without undue experimentation.' *In re Wright* 999 F.2d 1557, 1561, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993); *see also Amgen Inc. v. Chugai Pharms. Co.*, 927 F. 2d 1200, 1212, 18 USPQ2d 1016, 1026 (Fed Cir. 1991); *In re Fisher*, 427 F. 2d 833, 166 USPQ 18, 24 (CCPA 1970) ('[T]he scope of the claims must bear a reasonable correlation to the scope of enablement provided by the specification to persons of ordinary skill in the art.').
>
> *****
>
> "Patent protection is granted in return for an enabling disclosure of an invention, not for vague intimations of general ideas that may or may not be workable. *See Brenner v. Manson*, 383 U.S. 519, 536, 148 USPQ 689, 696 (1966) (starting, in context of the utility requirement, that 'a patent is not a hunting license. It is not a reward for the search, but compensation for its successful conclusion.') Tossing out the mere germ of an idea does not constitute enabling disclosure. While every aspect of a generic claim certainly need not have been carried out by an inventor, or exemplified in the specification, reasonable detail must be provided in order to enable members of the public to understand and carry out the invention.
> "It is true . . . that a specification need not disclose what is well known in the art. *See, e.g., Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1385, 231 USPQ 81, 94 (Fed. Cir. 1986). However, that general, oft-repeated statement is merely a rule of supplementation, not a substitute for a basic enabling disclosure. It means that the omission of minor details does not cause a specification to fail to meet the enablement requirement. However, when there is

> no disclosure of any specific starting material or any of the conditions under which a process can be carried out, undue experimentation is required; there is a failure to meet the enablement requirement that cannot be rectified by asserting that all the disclosure related to the process is within the skill of the art. It is the specification, not the knowledge of one skill in the art, that must supply the novel aspects of an invention in order to constitute adequate enablement. This specification provides only a starting point, a direction for further research. (Emphasis added)

Therefore, with no essential starting materials being provided, undue experimentation is required. Accordingly, and in the absence of convincing evidence to the contrary, claims 27 and 31-37 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement.

Response to argument

27. At page 24 of the response said representative asserts that the enablement rejection must be withdrawn in view of the rebuttal of the written description-based rejection of claims under 35 USC 112, first paragraph.

28. The above argument has not been found persuasive towards the withdrawal of the rejection for while a rebuttal has been provided, it has not been found persuasive.

29. Agreement is reached in that art that an applicant has improperly incorporated by reference may be relied upon to establish the level of skill in the art at the time of filing, however, essential material found therein cannot be relied upon or brought into the body of the instant disclosure. In the instant application the nucleotide sequence of RUBISCO encoding polynucleotides is critical to the invention as is the knowledge of the amino acid sequence that exhibits the requisite activity. Here, the specification is essentially silent as to what the amino acid sequence is for the various subunits, be they large and/or small as found in the form of

RUBISCO that is comprised of numerous subunits, or of a form of RUBISCO that is encoded by a single gene. Furthermore, the specification is silent as to its teaching of relevant nucleotide sequences could be used. In short, applicant has not provided the most basic and essential starting materials. Accordingly, and in the absence of convincing evidence to the contrary, the rejection is maintained.

Conclusion

30. Objections and/or rejections which appeared in the prior Office action and which have not been repeated hereinabove have been withdrawn.

31. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

32. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

33. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley L. Sisson whose telephone number is (571) 272-0751. The examiner can normally be reached on 6:30 a.m. to 5 p.m., Monday through Thursday.

34. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, W. Gary Jones can be reached on (571) 272-0745. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

35. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Bradley L. Sisson
Primary Examiner
Art Unit 1634

BLS
31 May 2005